UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte YOSHIHISA SUZUKI, SAYOKO TANAKA, HITOSHI NOGUCHI, and HIROKI ISHIDA

Appeal No. 2007-0464
Application 09/964,874

On Brief

Before LEE, DELMENDO, and TIERNEY, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

A. Statement of the Case

This is a decision on appeal by an applicant under 35 U.S.C. ' 134(a) from a rejection of claims 10-13 and 24-27 in application 09/964,874. We have jurisdiction under 35 U.S.C. § 6(b). The real party in interest is SANYO Electric Co. Ltd.

References relied on by the examiner

Kulakowski et al. (Kulakowski)	U.S. Patent 5,566,077	October 15, 1996
Tsutsui	U.S. Patent 5,699,333	December 16, 1997
Takasugi	U.S. Patent 4,507,767	March 26, 1985
Davis	U.S. Patent 5,276,697	January 4, 1994

Takagi et al. (Takagi)	U.S. Patent 6,567,350	May 20, 2003
Otsuka	JP Pat. Pub. 10-283645	October 23, 1998
Tsuchimochi	JP Pat. Pub. 08-306052	November 22, 1996

The Rejections on Appeal

The following rejections were maintained in the Examiner's Answer. All other rejections made prior to the filing of the applicant's appeal brief are regarded as withdrawn.

1. The examiner rejected claim 24 under 35 U.S.C. § 102 as anticipated by Otsuka.

2. The examiner rejected claims 10-11 under 35 U.S.C. § 103 as unpatentable for obviousness over Kulakowski and either Tsuchimochi or Tsutsui.

3. The examiner rejected claims 12-13 and 26-27 under 35 U.S.C. § 103 as unpatentable for obviousness over either Takasugi or Davis.

4. The examiner rejected claim 25 under 35 U.S.C. § 103 as unpatentable for obviousness over Otsuka and either Kulakowski or Takagi.

B. Issues

1. Has the applicant shown error in the anticipation rejection of claim 24 over Otsuka?

2. Has the applicant shown error in the obviousness rejection of claims 10-11 over Kulakowski and either Tsuchimochi or Tsutsui?

3. Has the applicant shown error in the obviousness rejection of claims 12-13 and 26-27 over Takasugi or Davis?

4. Has the applicant shown error in the obviousness rejection of claim 25 over Otsuka and either Kulakowski or Takagi?

C. Summary of the Decision

Applicant has not shown error in the anticipation rejection of claim 24. Applicant has shown error in the obviousness rejection of claims 10-11. Applicant has shown error in the obviousness rejection of claims 12-13 and 26-27. Applicant has not shown error in the obviousness rejection of claim 25.

D Findings of Fact (Referenced as FF. ¶ No.)

1. The invention is directed to an optical disk drive which records information onto and reproduces information from an optical disk, and is more particularly directed to how the disk drive handles the setting of a focus offset, a tracking offset, or a laser output value. (Specification, Page 1, Lines 5-12).

2. In the pertinent art, it was known to set the focus offset, the tracking offset, and the laser output value, at the time of startup of the optical disk drive. (Specification, Page 2, Lines 21-23).

3. It was known to set the focus offset of the disk drive to a value at which an RF signal is maximized. (Specification, Page 2, Lines 5-6).

4. It was known to set the tracking offset of the disk drive to a value at which a tracking error signal obtained in an on-track state comes to the center of a tracking error signal obtained in an off-track state. (Specification, Page 2, Lines 6-11).

5. It was known to set the laser output value such that a data error rate would be minimized. (Specification, Page 2, Lines 18-19).

6. A change in the operating temperature of the disk drive, either due to a change in the ambient temperature or to operations of electrical circuits in the disk drive, causes the set offset values and the set laser output value to deviate from the optimal.

7. Optimal offset values change in accordance with temperature. (Specification, Page 3, Lines 15-16).

8. If offset values deviate from the appropriate values, recording and reproducing operations of the optical disk drive may fail to perform properly. (Specification, Page 3, Lines 16-18).

9. Claims 10, 12, 24 and 26 are independent claims. Claims 10 and 12 each recites a first temperature measurement means for measuring an internal temperature of the optical disk drive at startup of operations, and a second temperature measurement means for measuring an internal temperature of the optical disk drive sometime after startup of operations of the disk drive. Claims 24 and 26 each requires a temperature sensor for sensing an internal temperature of the optical disk drive and requires the sensor to take a measurement at startup of the disk drive and again sometime after startup of the disk drive.

10. Claim 10 recites a setting means for setting a focus offset value and/or a tracking offset value at startup of the optical disk drive, a determining means for determining whether the measurement of the first and second temperature measurement means differ by more than a predetermined level, and a resetting means for resetting the focus offset value and/or the tracking offset value when that condition is met.

11. Claim 12 recites a setting means for setting a laser output value at startup of the disk drive, a determining means for determining whether the measurement of the first and

second temperature means differ by more than a predetermined level, and a resetting means for resetting the laser output value set by the setting means when that condition is met.

12. Claim 24 recites a controller for setting a focus offset value and/or a tracking offset value at startup of the disk drive, which also determines whether the two measurements of the temperature sensor differ by more than a predetermined level, and which then resets the focus offset value and/or the tracking offset value when the condition is met.

13. Claim 26 recites a controller for setting the laser output value at startup of operations of the optical disk drive, which also determines whether the two measurements of the temperature sensor differ by more than a predetermined level, and which then resets the laser output value when the condition is met.

14. In applying Otsuka against claim 24, the examiner actually relied on and cited to an English translation of Otsuka rather than the original Japanese language document. That translation is in the record and it is what we refer to when using the phrase "Otsuka-English."

15. Otsuka discloses an optical disk drive in which a microcomputer 15 adjusts the tracking offset. (Otsuka-English, Paragraphs 1-2, 5).

16. Otsuka is concerned with the problem of temperature change in the optical disc drive which throws off the adjusted tracking offset which was set only once at startup of the disk drive. (Otsuka-English, Paragraph 9).

17. Drawing 3 of Otsuka is a figure comprising two columns, the left column being entries for a series of temperature ranges, and the right column showing a four digit code corresponding to each temperature range in the left column.

18. Paragraph 23 of Otsuka appears to be concerned with the initial setting of a tracking offset based on temperature sensing and a reading of corresponding offset data from a stored table as is depicted in Drawing 3, and it reads as follows:

> [0023] Temperature sensor 3A is prepared in the frame of an optical pickup 4. The data detected by the temperature sensor are inputted into a microcomputer 15, and temperature is detected. The temperature requirement by which the control data beforehand doubled with the temperature characteristic of tracking offset of an optical pickup 4 was decided to be memory' in a microcomputer 15 is taken charge of, and it memorizes. For example, according to the contents of storage which are shown in drawing 3 and which were beforehand memorized by memory, the data which negate DC component of a tracking error signal are read with a microcomputer 15, data processing is carried out by the servo processing IC 3, and the tracking servo of the optical pickup is carried out with the head amplifier 5.

19. Paragraphs 24 and 25 appear to be concerned with subsequent setting, or resetting, of the tracking offset based on further temperature sensing and a reading of corresponding offset data from a stored table as is depicted in Drawing 3, and read as follows:

> [0024] Next, the flow chart shown in drawing 2 explains change operation controlled according to the temperature in the equipment of tracking offset of the optical pickup 4 in MD recorder of this example. When MD recorder is in record or a reproduction state, a microcomputer 15 carries out temperature detection from temperature sensor 3A by the regular time interval (S1), incorporates the detected data on a microcomputer 15, distinguishes a part for which temperature requirement or a temperature province, distinguishes the present temperature, and memorizes it to memory 15' (S2).
>
> [0025] A microcomputer 15 sets up the data which read the control data in the present temperature (S3), input into the servo processing IC 3, and negate offset from the control data beforehand memorized by memory 15' as control data of the tracking offset which is adapted for the optical pickup 4 used for every temperature requirement beforehand, as it is shown in drawing 3 in order to negate offset for example, and it updates tracking offset control through the head amplifier 5 (S4).

20. Kulakowski discloses an optical disk drive in which a sensor measures the operating temperature of the device and the measured temperature is compared with two threshold values. (Kulakowski, Column 2, Line 63 through Column 3, Line 9.)

21. Kulakowski discloses that if the measured temperature exceeds a first threshold temperature, a microprocessor dynamically adjusts the duty cycle of the disk drive by inhibiting high temperature write and erase operations. (Kulakowski, Column 2, Line 66 through Column 3, Line 3.) And if the measured temperature exceeds the second threshold temperature, a control circuit further inhibits read and verify operations as well. (Kulakowski, Column 3, Lines 3-5.) Kulakowski discloses that as a consequence of these inhibitions the temperature of the disk drive can be controlled to stay within a predetermined range and the system provides a way to address the heat generation problem associated with computer peripheral equipment. (Kulakowski, Column 3, Lines 5-7 and Lines 17-19.)

22. Kulakowski does not disclose changing or modifying the focus or tracking offset value of the optical disk drive at any time. It is just concerned with maintaining the operating temperature of the disk drive to within predetermined parameters which may be controlled by a user through a host computer. (Kulakowski, Column 3, Lines 5-8; Column 5, Lines 15-18.)

23. Tsutsui discloses that temperature changes in an optical disk drive may vary the necessary offset in the focus and tracking offset servo signals. (Tsutsui, Column 1, Lines 38-46.)

24. Tsutsui discloses continual adjustment of the servo offset to an optimal value during operation of the optical disk drive, whenever the quantity of stored data supplied by a reproducing means exceeds the quantity of recorded data corresponding to one rotation of the optical disk. (Tsutsui, Column 1, Line 64 through Column 2, Line 19.) Because of the continual adjustment of the servo offset, based on the quantity of data reproduced as compared to the

quantity of recorded data corresponding to one rotation of the optical disk, temperature changes in the disk drive will not destabilize data playback. (Tsutsui, Column 2, lines 19-22 and Column 2, Line 64 through Column 3, line 3.)

25. Tsutsui does not disclose measuring the operational temperature of the optical disk drive.

26. In applying Tsuchimochi against claims 10 and 11, the examiner actually relied on and cited to an English translation of Tsuchimochi rather than the original Japanese language document. That translation is in the record and it is what we refer to when using the phrase "Tsuchimochi-English."

27. Tsuchimochi discloses an optical disk drive in which a temperature sensor senses whether the operating temperature is low or high and when the temperature is high the rise time of a recording pulse is delayed so that the margin of the recording power applied to the medium becomes enlarged and thus the focal offset is changed. (Tsuchimochi-English Paragraph Nos. 39 and 40.)

28. Davis discloses an automatic power control circuit for a laser diode, in which power is shunted around the laser diode when the temperature of the laser diode is detected to be above or below a predetermined temperature range. (Davis, Column 2, Line 48 through Column 3, Line 6.)

29. Takasugi discloses an optical disk drive using a semiconductor laser as a light source, including a protection circuit which is connected in parallel with the laser to short-circuit the laser when the output of the laser exceeds a predetermined value. (Takasugi, Figure 4 and Abstract.)

30. In Takasugi, the short-circuiting of power around the laser is not triggered by any temperature measurement of the disk drive.

31. Takagi is concerned with making control adjustments, such as in focus, tracking, and power output, in a disk drive in response to environmental changes such as a temperature change. (Takagi, Column 1, Lines 49-52.)

32. Takagi discloses continual measurement of the temperature inside the optical disk drive near the optical head. (Takagi, Column 1, Lines 49-62; Column 16, Lines 8-10.)

33. In Takagi, the measured temperature values are transmitted to a control unit which continually determines a temperature change from the time the last control adjustment was made, and when that difference in temperature exceeds a predetermined value, steps are taken to make a further adjustment. (Takagi, Column 16, Lines Lines 10-17.)

34. Claims 10, 12, and 24 read as follows:

Claims 10: An optical disk drive comprising:

setting means for setting a focus offset value and/or a tracking offset value at startup of the optical disk drive;

first temperature measurement means for measuring an internal temperature of the optical disk drive at startup of the optical disk drive;

second temperature measurement means for measuring an internal temperature the optical disk drive after startup of the optical disk drive;

determination means for determining whether or not a difference between the temperature measured by the second temperature measurement means and the temperature measured by the first temperature measurement means has exceeded a predetermined level; and

resetting means for resetting the focus offset value and/or the tracking offset value set by the setting means when the determination means determines that the difference has exceeded the predetermined level.

Claim 12: An optical disk drive comprising:

setting means for setting a laser output value of a light-emitting section, a laser being output from the light-emitting section for recording and/or reproducing data on and/or from an optical disk, at startup of the optical disk drive;

first temperature measurement means for measuring an internal temperature of the optical disk drive at startup thereof;

second temperature measurement means for measuring an internal temperature of the optical disk drive after startup thereof;

determination means for determining whether or not a difference between the temperature measured by the second temperature measurement means and the temperature measured by the first temperature measurement means has exceeded a predetermined level; and

resetting means for resetting the laser output value set by the setting means when the determination means determines that the differences has exceeded the predetermined level.

Claim 24: An optical disk drive comprising:

a temperature sensor for sensing an internal temperature of the optical disk drive; and

a controller for setting a focus offset value and/or a tracking offset value, wherein

the controller sets a focus offset value and/or tracking offset value at startup of the optical disk drive, determines whether or not a difference between a temperature measured by the temperature sensor at startup of the optical disk drive and a temperature measured by the temperature sensor after startup of the optical disk drive has exceeded a predetermined level, and

resets the focus offset value and/or the tracking offset value when the difference is determined to have exceeded the predetermined level.

E. Principles of law

To establish anticipation under 35 U.S.C. § 102, each and every element in a claim, arranged as is recited in the claim, must be found in a single prior art reference. Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001). Anticipation can be found when a claim limitation is inherent or otherwise implicit in the relevant reference. Standard Havens Products, Inc. v. Gencor Industries, Inc., 953 F.2d 1360, 1369, 21 USPQ2d 1321, 1328 (Fed. Cir. 1991). But for establishing inherency, that which is missing in the express description must necessarily be present and would be so recognized by one with ordinary skill in the art. Continental Can Co. USA Inc. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). Inherency may not be established by probabilities or possibilities, and the mere fact that a certain thing may result from a given set of circumstance is not sufficient. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). In proceedings before the U.S. Patent and Trademark office, claims are properly construed according to their broadest reasonable interpretation consistent with the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); Ex Parte Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969).

F. Analysis

The Anticipation Rejection of Claim 24 over Otsuka

With regard to claim 24, the only claim features argued by the applicant as not shown by the examiner as disclosed by Otsuka are two: (1) the setting of a focus offset value and/or tracking offset value at startup of the optical disk drive, and (2) subsequent resetting of the focus

offset value and/or the tracking offset value. Appeal Brief at Page 7, Lines 4-12. Although a few lines later on the same page in the appeal brief the applicant added the words "in the manner described in the claim," a full reading of the argument reflects the applicant's clear position that it is because the examiner did not show that Otsuka discloses "any" setting and resetting whatsoever that Otsuka cannot possibly disclose setting and resetting in the manner described in the claim. On Page 8 of the appeal brief the applicant restates that the examiner has not shown that Otsuka discloses setting and resetting under the conditions specified in the claim.

It suffices to say only that the applicant's argument is general and never identifies what manner or condition for setting and resetting is not met by Otsuka. Indeed, as noted above there is a clear explanation in the appeal brief that setting and resetting an offset in the manner required by the claim are not met by Otsuka only because the examiner has not shown that Otsuka discloses any setting and resetting of an offset value. We decline to look on our own for manners and conditions in the claim, unspecified by the applicant, which may not be met by Otsuka. If there is a missing feature, the argument has been waived.

The examiner cited to Paragraphs 23-27 of Otsuka-English as supporting the determination that the features of setting a tracking offset value at startup and subsequent resetting of the tracking offset value are met. We have quoted Paragraphs 23-25 of Otsuka-English in Fact Findings 18 and 19, and find that those portions of Otsuka-English reasonably convey the setting of a tracking offset at startup and subsequent resetting of the tracking offset at a later time. The word "Next" at the beginning of Paragraph 24 reasonably indicates that the setting of the offset value as described in Paragraph 23 is in a category all by itself, separate from all the subsequent resetting as described in Paragraphs 24 and 25. The examiner has set forth at least a prima facie case that Otsuka discloses an initial setting of the tracking offset value

at startup and subsequent resetting of the tracking offset at a later time. It was incumbent upon the applicant to rebut the prima facie case.

All the applicant has done, however, is to argue that the examiner did not specifically explain where the disclosure for setting and resetting an offset value exists in Otsuka. According to the applicant, the examiner merely cited to Paragraphs 23-33 of Otsuka-English and that that was not specific enough. In the Examiner's Answer, the citation of support was narrowed to Paragraphs 23-27 of Otsuka-English and the applicant in the reply brief still regards that as not specific enough. The applicant does not submit that Otsuka does not disclose what the examiner found it discloses and has not discussed the portions of the reference cited by the examiner as disclosing the feature. The sole argument put forth is that the examiner provided no explanation as to why the cited portions of the reference meet the claim features at issue.

While an examiner must explain the rejection and offer up a rationale in support of the rejection, the explanation does not have to be in a particular form and style that suits the applicant's preference, and the citation of support to a reference need not have the same accuracy and precision as that possessed by a cartographer. Paragraphs 23-25, as reproduced in Fact Findings 19 and 20, reasonably apprise the applicant of the examiner's position, and Paragraphs 23-27 together covering only thirty-one lines of text are not so voluminous as to constitute excessively burdensome material for the applicant to review. The relevance of Paragraphs 23-25 is self-evident even upon only a cursory review of the same.

The applicant cites a Board decision in Appeal No. 2003-0121 in which the panel determined that the examiner did not adequately indicate how the asserted prior art rendered the rejected claims unpatentable. The adequacy of the explanation has to be determined on a case by case basis. In this case, the explanation given by the examiner was sufficient. There is much in

the examiner's cited support in Otsuka-English for the applicant to address or rebut if the applicant's position is that the cited paragraphs do not disclose the setting and resetting of the tracking offset. The applicant chose not to address the cited portions of Otsuka-English.

For the foregoing reasons, we reject the applicant's argument that the examiner has not adequately explained the basis of the anticipation rejection of claim 24 over Otsuka.

The Obviousness Rejection of Claims 10 and 11 over Kulakowski, and either Tsuchimochi or Tsutsui

Kulakowski discloses an optical disk drive in which a sensor measures the operating temperature of the device and the measured temperature is compared with two threshold values (FF. 20). Kulakowski discloses that if the measured temperature exceeds a first threshold temperature, a microprocessor adjusts the duty cycle of the disk drive by inhibiting high temperature write and erase operations, and if the measured temperature exceeds the second threshold temperature, a control circuit further inhibits read and verify operations as well (FF.21). Kulakowski discloses that as a consequence of the inhibitions the temperature of the disk drive can be controlled to stay within a predetermined range and the system provides a way to address the heat generation problem associated with computer peripheral equipment (FF. 21). Kulakowski does not disclose changing or modifying the focus or tracking offset value of the optical disk drive at any time (FF. 22).

Independent claim 10 requires measuring of the temperature at startup of the optical disk drive and measuring the temperature again sometime after startup of the optical disk drive, and determining when the difference of those two measured temperatures has exceeded a predetermined level. Claim 10 further requires that when the difference in the two measured

temperatures has exceeded the predetermined level, resetting the focus offset value or the tracking offset value.

The examiner acknowledges that Kulakowski does not disclose setting or resetting of a focus offset, but asserts that both Tsutsui and Tsuchimochi disclose the "ability of correction/compensating for focus offset during temperature variations" (Answer, Page 5, Lines 8-11). The examiner concludes that it would have been obvious to one with ordinary skill in the art to apply Tsutsui's or Tsuchimochi's alleged offset compensation for temperature variation in Kulakowski's disk drive, but provides no detail as to how the temperature compensation for offset adjustment allegedly disclosed by Tsutsui and Tsuchimochi should or would take place in Kulakowski to arrive at the claimed invention.

In the Examiner's Answer on page 8, it is indicated that the examiner regards as inherently present in Kulakowski's disclosure the claim features of (1) determining means for determining whether or not a difference between the temperature measured by the second temperature measurement means and the temperature measured by the first temperature measurement means has exceeded a predetermined level; and (2) resetting means for resetting the focus offset value and/or the tracking offset value set by the setting means when the determining means determines that the difference has exceeded the predetermined level. Both findings of inherency are incorrect. Kulakowski discloses only measuring the temperature to see if it exceeeds a first threshold and also if it exceeds a second threshold (FF. 20 and 21). And Kulakowski does not disclose changing or adjusting the focus or tracking offset at any time, certainly not in response to any temperature measurement (FF. 22). The examiner has not pointed to any portion of Kulakowski as implicitly and necessarily disclosing resetting of the focus or tracking offset, much less such resetting when the difference in the first and second

temperature measurements exceeds a predetermined level. Although there is an explanation on page 8 of the Examiner's Answer to the effect that the examiner interprets the first threshold temperature in Kulakowski as a temperature measured at startup of the disk drive, i.e., the first temperature measurement required by applicant's claim 10, no basis has been identified for that interpretation. We do not find that either the first threshold temperature or the second threshold temperature in Kulakowski is disclosed as a temperature measured in Kulakowski at startup of the disk drive.

Neither Tsutsui nor Tsuchimochi, as applied by the examiner for teachings concerning resetting the focus or tracking offset, makes up for the deficiency of Kulakowski as discussed above. In particular, Tsutsui does not disclose any measuring of the temperature of the disk drive (FF. 25). Tsuchimochi's disclosure about measuring the temperature to see if it is considered low or high is no more applicable to the claimed invention than Kulakowski's disclosure about comparing the measured temperature with a first and a second threshold.

Claim 11 depends from claim 10 and thus includes all the features of claim 10. The deficiencies of the prior art as applied to claim 10 equally apply to claim 11.

The Obviousness Rejection of Claims 12-13 and 26-27 over Kulakowski, and either Takasugi or Davis

Claims 12-13 and 26-27 are directed to the setting at startup and subsequent resetting of the laser output value of an optical disk drive, in contrast with claims 10-11 which are directed to the setting and resetting of a focus offset or a tracking offset of the optical disk drive.

Like claim 10, independent claims 12 and 26 each requires determining whether a measured temperature of the optical disk drive after startup differs from a measured temperature of the optical disk drive at startup by more than a predetermined level. The examiner regards

that feature as inherently met by Kulakowski but that position is incorrect as has been discussed in connection with the rejection of claims 10-11. As noted above, there is no basis to read the first threshold temperature in Kulakowski as the temperature of the optical disk drive measured at startup. Neither Takasugi nor Davis, as applied by the examiner for teachings concerning resetting the laser output value of the optical disk drive, makes up for the deficiency of Kulakowski with regard to determining whether the two temperature measurements differ by more than a predetermined level. Takasugi short-circuits power around a semiconductor laser in an optical disk drive when the output from the laser diode exceeds a predetermined level (FF. 29), but the shunting is not in response to any temperature measurement (FF. 30). Davis discloses shunting around a laser diode when the temperature of the laser diode is above or below a predetermined temperature range (FF. 28), but that is similar to Kulakowski's determining whether a measured temperature differs from a predetermined threshold and not the same as comparing the measured temperature to the temperature measured at startup of the disk drive.

Claim 13 depends from claim 12 and claim 27 depends from claim 26. The deficiencies of the prior art as applied to claims 12 and 26 equally apply to claims 13 and 27.

The Obviousness Rejections of Claim 25 over Otsuka and either Kulakowski or Takagi

Claim 25 depends from claim 24 and further requires determining whether the difference between the most recently measured temperature and the measured temperature "immediately preceding" the most recently measured temperature exceeds a predetermined level, and resetting the focus offset or the tracking offset when that condition has been met. According to the examiner, the difference between Otsuka and the subject matter of claim 25 is that Otsuka does

not disclose measuring temperature a number of times and taking responsive action based on the difference between the measured temperature and the measured temperature immediately preceding the most recently measured temperature. Answer at page 13, Lines 12-15. For that feature of the claimed invention, the examiner relies on Kulakowski and alternatively on Takagi.

The examiner's reading of Kulakowski is incorrect. Kulakowski compares a measured temperature with a first threshold and also a second threshold. There is no basis to read a threshold temperature to which a measured temperature is compared as itself a measured temperature and one measured either at startup of the disk drive as is required by claim 24 or one measured immediately preceding the most recently measured temperature as is further specified in claim 25. The portions of Kulakowski cited by the examiner do not describe either the first or the second threshold value as a measured temperature.

Takagi, on the other hand, does disclose continual measurement of the temperature inside the optical disk drive near the optical head (FF. 32). The measured values are transmitted to a control unit which continually determines a temperature change from the time the last control adjustment was made, and when that difference in temperature exceeds a predetermined value, steps are taken to make a further adjustment (FF. 33).

The applicant argues that Takagi's polling of the operating temperature is not the same as determining the difference between the most recently measured temperature and the measured temperature immediately preceding the most recently measured temperature. The argument is misplaced. Precise sameness is not the issue. If it were, then certainly Takagi's looking at the difference between the most recently measured temperature and the measured temperature at the time of the last control adjustment is not precisely the same as looking at the difference between the most recently measured temperature and the immediately preceding measured temperature.

The claimed limitation need only read on the operation of Takagi once, i.e., a single time, no matter how long Takagi's disk drive operates. And it does. It always does for that temperature measured immediately after the temperature measurement resulting in the last control adjustment. The claim limitation at issue reads on Takagi's disclosure for the pairs of temperature measurements including one at the time of a control adjustment and the one immediately thereafter. Claim 25 is sufficiently broad that the comparison need only be made once. The limitation does not have to be met for each successive pairs of temperature measurements. That is not what the claim requires. Moreover, during examination before the U.S. Patent and Trademark Office, claim terms are properly construed according to their broadest reasonable interpretation not inconsistent with the specification. We have no reason to read into the claim a requirement that for each pair of two successive temperature measurements, a determination of difference be made and that whenever the difference exceeds a predetermined value the focus or tracking offset be reset. That would be an unduly narrow interpretation.

Conclusion

The rejection of claim 24 as anticipated by Otsuka under 35 U.S.C. § 102 is **affirmed**.

The rejection of claims 10-11 for obviousness under 35 U.S.C. § 103 based on the combined teachings of Kulakowski and either Tsuchimochi or Tsutsui is **reversed**.

§ 102(e) is **reversed**.

The rejection of claims 12-13 and 26-27 for obviousness under 35 U.S.C. § 103 based on the combined teachings of Kulakowski and either Takasugi or Davis is **reversed**.

The rejection of claim 25 for obviousness under 35 U.S.C. § 103 based on Otsuka and Kulakowski is **reversed**.

The rejection of claim 25 for obviousness under 35 U.S.C. § 103 based on Otsuka and Takagi is **affirmed**.

No time period for taking any subsequent actions in connection with this appeal may be extended under 37 CFR§ 1.136(a).

AFFIRMED-IN-PART

JAMESON LEE Administrative Patent Judge	
ROMULO H. DELMENDO Administrative Patent Judge	BOARD OF PATENT APPEALS AND INTERFERENCES
MICHAEL P. TIERNEY Administrative Patent Judge	

Appeal No. 2007-0464
Application 09/964,874

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